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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,538	01/16/2001	William J. Dally	2789.2005-002	5874
24319	7590	09/17/2004	EXAMINER	
LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 LEGAL MILPITAS, CA 95035			CHANG, RICHARD	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,538

Applicant(s)

DALLY, WILLIAM J.

Examiner

Richard Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 17 and 33-37 is/are rejected.
- 7) ☒ Claim(s) 3-16 and 18-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 17 and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,693,902 ("Sahlman et al") in view of U.S. Patent No. 5,331,632 ("Aaron et al") and U.S. Patent No. 6,646,983 ("Roy et al").

Regarding claim 1-2, 17, and 33, Sahlman et al teach a Cross-connection architecture for SDH signals (a digital cross connect) comprising
a SDH frame based time-and-space division switch groups where time switch realizes the rearrangement of the time slots or bytes in accordance with the route selection calculated by the decoder processor control before they are transmitted to the space switch (plural switching stages ... and switching the data in time and space), and further disclose that an SDH DXC can transmit traffic between different SDH levels and connect traffic between different signals. The use of the cross connect also includes a possibility for remote control of routing, initialization of reserve routes, connection from one signal to several signals; (See Fig. 1, Col. 4, line 62 to Col. 6, line 36).

Sahlman et al teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

"means for switching configuration ... input switching means of an input stage"

and "configuration storage ... for the switch".

Roy et al teach an advanced network switch wherein
a request control table to store the control headers from these queues are
forwarded to the arbiter 56 which forms request elements from the control headers and
forwards these requests to the switch data mapper 52 for transmission through the
switch (configuration storage ... for the switch),

the data stream deserializer 126 synchronizes to the incoming serial data stream
to restore the configuration and all of this configuration is performed at initialization
(means for switching configuration ... input switching means of an input stage), and

the SPE consists of the Path level overhead and the payload data for
synchronization information (the configuration select signal is embedded within a frame
of data); (See Fig. 2, Col 12, line 55 to Col. 14, line 57).

A person of ordinary skill in the art would have been motivated to employ Roy et
al in Sahlman et al in order to obtain a multi-stage digital cross connect switch and to
take advantage of

a) a request control table storage and synchronization to the incoming serial data
stream to restore the configuration at the initiation in claims 1, 17 and 33 and

b) the synchronization information in the Path level overhead and the SPE in
claim 2.

The suggestion/motivation to do so would have been to accommodate a multi-
stage digital cross connect switch and to take advantage of

a) a request control table storage and synchronization to the incoming serial data stream to restore the configuration at the initiation in claims 1, 17 and 33 and

b) the synchronization information in the Path level overhead and the SPE in claim 2. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Roy et al with Sahlman et al to obtain the inventions specified in claims 1-2, 17 and 33.

Regarding claim 34-37, Sahlman et al and Roy et al teach substantially all the claimed invention and further "FIG. 2 it is for example possible to connect STM-1 signals from 16 time switches, and correspondingly the outputs to 16 time switches" (See Fig. 2, Col. 5, lines 1-10), but did not disclose expressly the particular application involving limitations of "each switch comprising a time slot interchanger associated with each input and output port".

Aeron et al teach an expandable time slot interchanger system in a telephone switching environment wherein a plurality of interface units 26 are connected by communication channels 28 to TSI 24 and the interface units provide for data expansion or multiplexing between data channels 30 and the TSI 24 representing that the switching system can be grown by utilizing corresponding sets of these elements (each switch comprising a time slot interchanger associated with each input and output port); " (See Fig. 1, Col. 3, lines 12-25)

A person of ordinary skill in the art would have been motivated to employ Aaron et al in Sahlman et al and Roy et al in order to obtain a multi-stage digital cross connect

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switch and to take advantage of an expandable time slot interchanger at the input and output interface node in claims 34-37.

The suggestion/motivation to do so would have been to accommodate a multi-stage digital cross connect switch and to take advantage of an expandable time slot interchanger at the input and output interface node in claims 34-37. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Arsrn et al with Sahlman et al and Roy et al to obtain the inventions specified in claims 34-37.

Allowable Subject Matter

3. Claims 3-16 and 18-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if no art rejection can be applied.

Examiner's Statement of Reasons for Allowance

4. Claims 41-52 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The prior art along or in combination fails to teach or make obvious the limitations that specifically comprises:

"A switch circuit on an integrated circuit chip wherein a second frame counter to which a second portion of the plural frames of time multiplexed input data is synchronized" as recited in the independent claim 41.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is 703-605-4398. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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rkC

Richard Chang
Patent Examiner
Art Unit 2663


KENNETH VANDERPUYE
PRIMARY EXAMINER